

**INDEPENDENT TESTING LAB**

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

Company: LAMBDA ENERGY RESOURCES, LLC

Name:

ClientProj: 2018100166.03

GTA ProjNo: 050721-5

Site Addr: PCA 1-6

Sampled By: PETER KALLIOINEN/GCES

Date Rec: 5/7/2021

Time Rec: 4:45 PM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	SB-4R3 (13.5')	5/7/2021	1:02 PM	SOIL
2	SB-4R3 (23')	5/7/2021	1:19 PM	SOIL
3	SB-4R3 (27')	5/7/2021	1:31 PM	SOIL
4	SB-8R2 (18')	5/7/2021	11:50 AM	SOIL
5	SB-8R2 (22')	5/7/2021	12:03 PM	SOIL
6	SB-9R (12')	5/7/2021	2:11 PM	SOIL
7	SB-9R (19')	5/7/2021	2:16 PM	SOIL
8	SB-9R (23')	5/7/2021	2:20 PM	SOIL
9	SB-12 (10')	5/7/2021	10:44 AM	SOIL
10	SB-12 (18')	5/7/2021	10:59 AM	SOIL

ELECTRONIC SIGNATURE REPORT. This is a final report for the following pages of data for the samples specified above. All analysis was performed by the methods stated and all quality control measures required were completed. All quality control information is available upon request.

Kirk Chase

Kirk L. Chase/Chemist
Grand Traverse Analytical
830 Robinwood Court
Traverse City, MI 49686
Ph: 231-929-0905
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COMPANY: LAMBDA ENERGY RESOURCES, LLC

PROJECT NO: 2018100166.03

LOCATION: PCA 1-6

MI

SAMPLE MATRIX: SOIL

SAMPLE ID: SB-4R3 (13.5')

GTA PROJECT NO: 050721-5

GTA SAMPLE NO: 1

DATE SAMPLED: 5/7/2021

TIME SAMPLED: 1:02 PM

DATE RECEIVED: 5/7/2021

TIME RECEIVED: 4:45 PM

SAMPLED BY: PETER KALLIOINEN/GCES

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
Benzene	4,400	50	ug/Kg (PPB) MR		5/7/2021	5/9/2021	EPA 5035A
Toluene	200,000	500					
Ethylbenzene	100,000	500					
Xylene(Total)	430,000	1,500					
1,2,4-Trimethylbenzene	290,000	500					
1,3,5-Trimethylbenzene	66,000	500					
Naphthalene	2,800	250					
2-Methylnaphthalene	24,000	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.

ND = NOT DETECTED, RESULT < LOD

LOD = LIMIT OF DETECTION

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COMPANY: LAMBDA ENERGY RESOURCES, LLC

PROJECT NO: 2018100166.03

LOCATION: PCA 1-6

MI

SAMPLE MATRIX: SOIL

SAMPLE ID: SB-4R3 (23')

GTA PROJECT NO: 050721-5

GTA SAMPLE NO: 2

DATE SAMPLED: 5/7/2021

TIME SAMPLED: 1:19 PM

DATE RECEIVED: 5/7/2021

TIME RECEIVED: 4:45 PM

SAMPLED BY: PETER KALLIOINEN/GCES

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EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
Benzene	ND	50	ug/Kg (PPB) MR		5/7/2021	5/9/2021	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC

PROJECT NO: 2018100166.03

LOCATION: PCA 1-6

MI

SAMPLE MATRIX: SOIL

SAMPLE ID: SB-4R3 (27')

GTA PROJECT NO: 050721-5

GTA SAMPLE NO: 3

DATE SAMPLED: 5/7/2021

TIME SAMPLED: 1:31 PM

DATE RECEIVED: 5/7/2021

TIME RECEIVED: 4:45 PM

SAMPLED BY: PETER KALLIOINEN/GCES

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
Benzene	ND	50	ug/Kg (PPB) MR		5/7/2021	5/9/2021	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC

PROJECT NO: 2018100166.03

LOCATION: PCA 1-6

MI

SAMPLE MATRIX: SOIL

SAMPLE ID: SB-8R2 (18')

GTA PROJECT NO: 050721-5

GTA SAMPLE NO: 4

DATE SAMPLED: 5/7/2021

TIME SAMPLED: 11:50 AM

DATE RECEIVED: 5/7/2021

TIME RECEIVED: 4:45 PM

SAMPLED BY: PETER KALLIOINEN/GCES

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
Benzene	ND	50	ug/Kg (PPB) MR		5/7/2021	5/9/2021	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC

PROJECT NO: 2018100166.03

LOCATION: PCA 1-6

MI

SAMPLE MATRIX: SOIL

SAMPLE ID: SB-8R2 (22')

GTA PROJECT NO: 050721-5

GTA SAMPLE NO: 5

DATE SAMPLED: 5/7/2021

TIME SAMPLED: 12:03 PM

DATE RECEIVED: 5/7/2021

TIME RECEIVED: 4:45 PM

SAMPLED BY: PETER KALLIOINEN/GCES

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
Benzene	390	50	ug/Kg (PPB) MR		5/7/2021	5/9/2021	EPA 5035A
Toluene	58	50					
Ethylbenzene	180	50					
Xylene(Total)	760	150					
1,2,4-Trimethylbenzene	170	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC

GTA PROJECT NO: 050721-5

PROJECT NO: 2018100166.03

GTA SAMPLE NO: 6

LOCATION: PCA 1-6

DATE SAMPLED: 5/7/2021

TIME SAMPLED: 2:11 PM

MI

DATE RECEIVED: 5/7/2021

TIME RECEIVED: 4:45 PM

SAMPLE MATRIX: SOIL

SAMPLE ID: SB-9R (12')

SAMPLED BY: PETER KALLIOINEN/GCES

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
Benzene	ND	50	ug/Kg (PPB) MR		5/7/2021	5/9/2021	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.

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COMPANY: LAMBDA ENERGY RESOURCES, LLC

GTA PROJECT NO: 050721-5

PROJECT NO: 2018100166.03

GTA SAMPLE NO: 7

LOCATION: PCA 1-6

DATE SAMPLED: 5/7/2021

TIME SAMPLED: 2:16 PM

MI

DATE RECEIVED: 5/7/2021

TIME RECEIVED: 4:45 PM

SAMPLE MATRIX: SOIL

SAMPLE ID: SB-9R (19')

SAMPLED BY: PETER KALLIOINEN/GCES

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
Benzene	140	50	ug/Kg (PPB) MR		5/7/2021	5/9/2021	EPA 5035A
Toluene	3,200	50					
Ethylbenzene	1,600	50					
Xylene(Total)	6,000	150					
1,2,4-Trimethylbenzene	4,100	50					
1,3,5-Trimethylbenzene	880	50					
Naphthalene	ND	250					
2-Methylnaphthalene	380	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.

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COMPANY: LAMBDA ENERGY RESOURCES, LLC

GTA PROJECT NO: 050721-5

PROJECT NO: 2018100166.03

GTA SAMPLE NO: 8

LOCATION: PCA 1-6

DATE SAMPLED: 5/7/2021

TIME SAMPLED: 2:20 PM

MI

DATE RECEIVED: 5/7/2021

TIME RECEIVED: 4:45 PM

SAMPLE MATRIX: SOIL

SAMPLE ID: SB-9R (23')

SAMPLED BY: PETER KALLIOINEN/GCES

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
Benzene	ND	50	ug/Kg (PPB) MR		5/7/2021	5/9/2021	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

SOIL/SOLIDS CONCENTRATIONS ARE DETERMINED ON A DRY WEIGHT BASIS.

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COMPANY: LAMBDA ENERGY RESOURCES, LLC

GTA PROJECT NO: 050721-5

PROJECT NO: 2018100166.03

GTA SAMPLE NO: 9

LOCATION: PCA 1-6

DATE SAMPLED: 5/7/2021

TIME SAMPLED: 10:44 AM

MI

DATE RECEIVED: 5/7/2021

TIME RECEIVED: 4:45 PM

SAMPLE MATRIX: SOIL

SAMPLE ID: SB-12 (10')

SAMPLED BY: PETER KALLIOINEN/GCES

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
Benzene	ND	50	ug/Kg (PPB) MR		5/7/2021	5/9/2021	EPA 5035A
Toluene	ND	50					
Ethylbenzene	140	50					
Xylene(Total)	550	150					
1,2,4-Trimethylbenzene	360	50					
1,3,5-Trimethylbenzene	80	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

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COMPANY: LAMBDA ENERGY RESOURCES, LLC

GTA PROJECT NO: 050721-5

PROJECT NO: 2018100166.03

GTA SAMPLE NO: 10

LOCATION: PCA 1-6

DATE SAMPLED: 5/7/2021

TIME SAMPLED: 10:59 AM

MI

DATE RECEIVED: 5/7/2021

TIME RECEIVED: 4:45 PM

SAMPLE MATRIX: SOIL

SAMPLE ID: SB-12 (18')

SAMPLED BY: PETER KALLIOINEN/GCES

**THIS SAMPLE WAS RECEIVED MEOH PRESERVED.

EPA 8260B VOLATILE ORGANICS

<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Complete</u>	<u>Prep Method</u>
Benzene	ND	50	ug/Kg (PPB) MR		5/7/2021	5/9/2021	EPA 5035A
Toluene	ND	50					
Ethylbenzene	ND	50					
Xylene(Total)	ND	150					
1,2,4-Trimethylbenzene	ND	50					
1,3,5-Trimethylbenzene	ND	50					
Naphthalene	ND	250					
2-Methylnaphthalene	ND	250					

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NAME:

PROJECT NO: 2018100166.03

LOCATION: PCA 1-6

MI

GTA PROJECT NO: 050721-

SAMPLED BY: PETER KALLIOINEN/GCES

DATE SAMPLED: 5/7/2021

TIME SAMPLED: 1:02 PM

SAMPLE MATRIX: SOIL

DATE RECEIVED: 5/7/2021

TIME RECEIVED: 4:45 PM

MOISTURE

No:	Analysis	Concentration	LOD	Units	Analyst	Date Completed
	SAMPLE ID: SB-4R3 (13.5')					
	% MOISTURE EPA 3550C	20	0.050	% OF SAMPLE	AS	5/7/2021
	SAMPLE ID: SB-4R3 (23')					
	% MOISTURE EPA 3550C	15	0.050	% OF SAMPLE	AS	5/7/2021
	SAMPLE ID: SB-4R3 (27')					
	% MOISTURE EPA 3550C	18	0.050	% OF SAMPLE	AS	5/7/2021
	SAMPLE ID: SB-8R2 (18')					
	% MOISTURE EPA 3550C	17	0.050	% OF SAMPLE	AS	5/7/2021
	SAMPLE ID: SB-8R2 (22')					
	% MOISTURE EPA 3550C	3.2	0.050	% OF SAMPLE	AS	5/7/2021
	SAMPLE ID: SB-9R (12')					
	% MOISTURE EPA 3550C	5.6	0.050	% OF SAMPLE	AS	5/7/2021
	SAMPLE ID: SB-9R (19')					
	% MOISTURE EPA 3550C	14	0.050	% OF SAMPLE	AS	5/7/2021
	SAMPLE ID: SB-9R (23')					
	% MOISTURE EPA 3550C	11	0.050	% OF SAMPLE	AS	5/7/2021
	SAMPLE ID: SB-12 (10')					
	% MOISTURE EPA 3550C	17	0.050	% OF SAMPLE	AS	5/7/2021
	SAMPLE ID: SB-12 (18')					
	% MOISTURE EPA 3550C	17	0.050	% OF SAMPLE	AS	5/7/2021

CHAIN OF CUSTODY

PROJECT NUMBER 201810016603	SITE NAME/ADDRESS PCA 1-6	COMPANY/NAME Lambda Energy Ref.
SAMPLED BY Peter Kallioinen	COMPANY Gosling Czubak	GTA PROJECT # 050721-5

SAMPLE INFORMATION

#	SAMPLE ID	DATE SAMPLED	TIME	MATRIX	ANALYSIS
1	SB-4R3 (13.5')	5-7-21	1:02	Soil	BTEX + 4
2	SB-4R3 (23')		1:19		
3	SB-4R3 (27')		1:31		
4	SB-8R2 (18')		11:50		
5	SB-8R2 (22')		12:03		
6	SB-9R (12')		2:11		
7	SB-9R (19')		2:16		
8	SB-9R (23')		2:20		
9	SB-12 (10')		10:44		
10	SB-12 (18')		10:59		

BILL TO:

Lambda

TempRec: ☐

4.0°c

On Ice? ☒ ☐

REPORT TO:

Gosling Czubak
attn: Jeff Simsa

RELEASED BY

DATE/TIME

[Signature] **5-7-21 4:45**

RECEIVED BY

DATE/TIME

[Signature] **5/7/21 4:45**
F

REQUESTED TAT ☒ **STANDARD**

☐ **1 BUSINESS DAY**

☐ **2 BUSINESS DAYS**

☐ **3 BUSINESS DAYS**